

Once you have your balloon car built, you must test out your initial design. The 3 meter track is marked off in the hallway. In order for your trial run to count the car needs to officially cross the finish line. You will be recording the time for each trial in the chart below and averaging the speed from the three trials.

### First set of trials:

	Distance	Time	Speed (m/s)
Trial #1	3 meters 2.5 m	2.3	1.08 m/s
Trial #2	3 meters 2.5 m	2.3	1.08 m/s
Trial #3	3 meters 2.5 m	2.6	0.9 m/s

Average Speed: 0.99 m/s

Now you have the opportunity to change your design if you have found that there seem to be problems. Explain below the changes you feel you need to make in order for the car's design to improve. What is most important is that you explain WHY! Do not forget to go back to your predictions to see where the problems may lie. After changes are made, fill in the data table below with the new design.

✓ We tightened the wheels so the car would move straighter. We cut off the back so it would be lighter.

### Second set of Trials:

	Distance	Time	Speed (m/s)
Trial #1	3 meters 2.5	2.3	1.08 m/s
Trial #2	3 meters 2.5	2.2	1.1 m/s
Trial #3	3 meters 2.5	2.1	1.2 m/s

Average Speed: 1.12 m/s

units + changes (-1)

### Part 3: Using Evidence and Applying what you learned:

Question: If your little brother or sister had this project to do a year from now, what advice would you give them about how to design the balloon car? Make sure you use specific data and evidence from your experience to explain to them the design elements that play a major role. Use scientific vocabulary to do this – remember you have a vocabulary list on the front page!

When you make a balloon car, you should make the front of the car have a point. That way, it will be more aerodynamic and have more velocity. You should make it have the least amount of mass that it can. You can do that by making the straw shorter or cutting off excess paper on the back. Make sure that the wheels are straight and that way.

Info  
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problem